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ABSTRACT

Some issues in connection with competency-based education (CBE) and the world of work discussed by the author include the relevance of CBE programs to work, the changing attitudes of students and young workers toward work, "credentialism" or the continual upgrading of educational requirements for employment, underemployment and CBE, and others. The author concludes that evaluation, policy analysis, and research in the areas of education and work are needed to make education more relevant to job needs. Appended research and analysis suggestions from a paper by James O'Toole of the University of Southern California concern the need for policy analysis and evaluation of educational research to provide ways to utilize CBE as a lever on problems of underemployment and credentialism. (MF)

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COMPETENCY-BASED EDUCATION AND THE WORLD OF WORK

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

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A. INTRODUCTION

This paper briefly addresses but a few of the salient issues being raised in connection with competency-based education (CBE) and the world of work.

Although most of these problems and issues are not the sole concern of competency-based educators, practitioners in competency-based programs are perhaps more frustrated by them than educators in traditional programs. Perhaps that is because CBE programs claim that they will prepare students for competent performance in jobs and in other of life's activities. They promise relevance and effectiveness and are anxious to deliver on those promises.

Moreover, their interpretation of "relevance" is not to merely prepare students to fit into existing slots in the employment system or to adjust to and cope with the problems life might deal out. "That," they say, "is a job for 'trainers' and 'behavior modifiers.' We want to educate students to reform the work place." However, they are frustrated by the grim scene of high unemployment rates, the lack of accessible information that can be comprehended by nonexperts about the world of work, and by technological lags in areas vital to implementing so many of their ideas.

The context within which CBE programs are attempting to become relevant with respect to work, and some of the general problems facing all educational programs attempting to do so, need to be kept in mind when making decisions about the kinds of assistance that might be needed. James O'Toole lists the following as "real and perceived problems" relating to the world of work:*

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*James O'Toole, "Human Resources Development and Competency-Based Education." Paper prepared for the Educational Policy Research Center, Syracuse University Research Corporation, June 1975, under NIE Contract #400-75-0036.

-Increase in job dissatisfaction at all levels of employment;

-"Dirty tasks" that people are no longer willing to do;

-High unemployment rates among teenagers, women, and minorities;

-Careers disappearing due to automation and shifts in priorities;

-A decline in the work ethic;

-People being trained for jobs that don't exist;

-Attacks on the basic tenets of credentialing, accrediting, & licensing;

-Decrease in national productivity;

-Dramatic mid-career changes;

-Failure of manpower training programs.

O'Toole's explanation of "job dissatisfaction," the first item on the list, is in terms of discrepancies in the supply and demand for educated workers and the changing attitudes of students and young workers. He offers the following data to demonstrate the phenomenon he calls "underemployment"—a phenomenon to which he attributes a majority of current job dissatisfaction.

<u>In Terms of Supply</u>:

-The median educational attainment of blue-collar workers rose from 9.2 years of schooling in 1952 to 12.0 years in 1972.

-College enrollment expanded from 2.6 million in 1952 to 8.4 million in 1972.

-According to projections, by 1980, one in four American workers will have a college degree.

<u>In Terms of Demand</u>:

-In 1948, 12.9% of the work force was in the category of "managers." By 1973, the percentage had grown to only 13.6%.

-In the highest skilled category of workers, between 1950 and 1970 demand grew from 7% to only 9%.

-The average education level required for all jobs increased from 10.0 years in 1940 to 10.5 years in 1970.

-In 1980, according to projections, less than 20% of all jobs will require a college degree.

Underemployment in the United States (the dysjunction of these two trends):

-Something like 80% of all college graduates now take jobs previously held by those with lower educational credentials.

-In 1958, less than 10% of college graduates took low-level jobs; in 1972 over 30% of graduates were forced to take such jobs.

-Between 1969 and 1974 the number of college graduates working as salesmen increased by 50%, and the number of women college graduates working as secretaries increased by 100%.

-By 1985 there will be 2.5 college graduates competing for every choice job leaving an annual "surplus" of 700,000 college students.

Changing Attitudes:

-Survey data show that young people, more than their elders, want and expect jobs that are "meaningful," challenging, and which allow them to grow and to learn.

-Each graduating class of young people desires higher and higher levels of education and better and better jobs.

-Young people, much more so than their parents, are chronically dissatisfied with their jobs.

B. CREDENTIALISM AND CBE

A trend which exacerbates the situation O'Toole outlines is referred to as "credentialism"--that is, the seemingly unceasing trend of upgrading educational credential requirements for jobs.

Some consider this trend unfair to the lower class (disproportionately comprised of ethnic and racial minorities), since they always trail the upper- and middle-class in obtaining educational credentials. Just at about the time they are almost all obtaining a high school diploma, employers begin asking for associates degrees to perform the same jobs. The jobs, we are told, are being "upgraded."*

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*Thomas F. Green, theoretical studies of education system, Syracuse University, Syracuse, New York

Consider the example of police officers. Everyone, especially competent, humane police officers themselves, would like to see the general level of competence and humaneness of police forces raised. The problem is that the solution offered is more education, not better, more appropriate education or better selection. Just at the time when Blacks, for example, stop dropping out of high school in large numbers and begin getting diplomas, people begin talking about requiring an associate's degree for jobs that now only require a high school diploma. Yet no one can demonstrate that having such a degree, in itself, (or even a high school diploma, per se) is in any way related to being a competent, humane police officer.*

It is important to attempt to recruit more capable and humane police officers. And it is probably the case that schools can help produce them; but it is to be proven that doing so requires 12, 14, 16, 18, or 20 years of any kind of schooling (average time to diploma, associate's degree, bachelor's degree, master's degree, and Ph.D.).** To sensibly and fairly approach the possibility of "upgrading" through education, we need to develop a more clear understanding than we now have of the dimensions of competence for various occupations and a clearer understanding of how people develop the necessary set or sets of characteristics.

Another reaction to "credentialism" and to its differential impact on those who lack the financial resources, or otherwise do not aspire to attend college (for 2 years, 4 years, or at all), is to make degrees less costly and time-consuming to obtain. The philosophy behind this attack on the problem is that for purposes of certification to the marketplace, it should not matter where students acquired their abilities. Competence is the thing. To implement this philosophy, many CBE programs are contemplating or already instituting:

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*A diabolical, perennial coincidence in occupation after occupation.

**It will probably not be proven, and will probably not be allowed by the Department of Justice which is clamping down on unfair and insupportable credentialism when minorities suffer the disproportionate consequences of such requirements.

(a) CBE performance certificates which take less time to acquire than degrees and are organized around specific domains of competence relating to specific kinds of activities (advanced standing or "testing out" being possible).

(b) CBE performance certification for diplomas and degrees. Sometimes this involves academic credit and advanced standing toward degrees (programs having some minimum residency requirements at the institution granting the degree or prescribing and offering courses as needed). Others involve external diplomas and degrees (no residency requirements in schools and no direct instruction; for example, the Regional Learning Service of Central New York's External High School Diploma and Stephen K. Bailey's suggested regional certification centers for postsecondary credentials).

The major problem in implementing this philosophy is clarifying the meaning of degrees and developing assessment systems to certify that students have met institutional standards. The danger is that if implementation of the ideas too far outpaces the availability of information and technological assistance needed to demonstrate the validity of degree requirements in terms of job performance, then the value of such credentials would be suspect in the eyes of employers.* Research and development to provide the kind of information needed and the technological assistance, therefore, is critical to the feasibility of broad applicaton of performance certification.**

Although making educational credentials less costly and time-consuming to obtain addresses problems of equity insofar as employment opportunity is concerned and, therefore, represents an important alternative route to certification, when it only involves assessment, it does not address problems of equal educational opportunity. It, in effect, says: "If people are so fortunate as to have acquired the same competence as is required for the conferral of degrees without having attended college, well, then, they should be given these degrees since, without them, they are at a distinct competitive

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* As is the value of traditional degrees. Blind faith is giving way to increasing skepticism.

** See Paul Pottinger, "Comments and Guidelines for Research in Competency Identification, Definition and Measurement." Educational Policy Research Center, Syracuse University Research Corporation, June 1975, NIE Contract #400-75-0036.

disadvantage in the labor market." However, if the phenomemon of "underemployment" is as extensive as some say--people not being challenged by their jobs; not learning much--then it is difficult to imagine how large numbers of people that go directly to jobs after high school will get the equivalent of a good college education. Some may be so fortunate, but not all and probably not even most.

Equal educational opportunity, under current interpretations, involves the allocation of educational resources such that educational outcomes between socio-economic classes and racial and ethnic groups are not as discrepant as is currently the case. At the postsecondary level, this seems to require letting in and keeping in young students who come to postsecondary education with lower grades and test scores, due not to lack of basic ability, but to unfortuitous life situations (like, perhaps, having attended inferior schools in the past) and assuring that affordable postsecondary programs are not likewise inferior. It would also seem to require providing opportunities for economically disadvantaged adults to re-enter the schools--not simply to be certified, but to take courses if they so desire.

The potential of CBE for effecting greater equal educational opportunity* and the needs of the programs in this regard are discussed in the paper on implementation of CBE programs.**

C. UNDEREMPLOYMENT AND CBE

There is considerable debate surrounding the issue of underemployment--some of it having to do with the possible inexactitude of data produced to support the claim that it is a pervasive problem, and some of it having to do with suggestions for its resolution.

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* Time-variable scheduling and mastery learning notions have been incorporated into several CBE programs--features which are very helpful in terms of the needs of students who must hold jobs and/or care for families and students needing to overcome educational disadvantages.

** Shiela M. Huff, "Problems in Implementing Competency-Based Educational Programs," Educational Policy Research Center, Syracuse University Research Corporation, June 30, 1975; prepared under NIE Contract No. 400-75-0036.

The "solution" most dreaded is "Lower the aspirations of students. Give them less 'highfalutin' education." In terms of Congressional funding patterns, this would read: "Provide less public money for postsecondary education, and what money you do provide, give to vocational education programs." Why so dreaded? These are but a few of the reasons that come to mind:

(a) Equity:

We can be fairly certain who would get vocational degrees or certificates if public support was withdrawn from the liberal arts (or 'general' education)--poor kids and the otherwise unsophisticated.

If it were demonstrated that people with only vocational post-secondary education hold as many of the best jobs in the country as do liberally educated individuals, fine. But there is reason to suspect that people with a good amount of liberal arts education (over and above possible narrow vocational training) hold the choicest jobs in society. Withdrawing public support from liberal education, therefore, would be a great step backward in terms of both equal educational and equal employment opportunity.

(b) Need for New and Improved Goods and Services:

The consumer protection movement should be convincing evidence that there is a good deal of incompetence in the world of work. Consumers are dissatisfied with the quality, quantity (sometimes) and type of goods and services available to the public. We do not know how much of the failure to meet comsumer expectations can be attributed to the "under-education" (too little or the wrong kind) of people in the work force and how much to the objectives, management, and organization of business, industry, and service agencies. However, some part of it is undoubtedly attributable to the kind of education employers and employees received.

(c) Manpower Reserves:

Some national or international emergency might arise tomorrow that calls for all the "overqualified" manpower we can assemble. One might say, in fact, such emergencies are already with us. We require the manpower reserves now. We simply can't figure out how to finance the needed projects and handle the politics.

(d) Need to Improve the Quality of Life:

Most would agree that there are grave problems affecting the quality of life in America.* Although rational people do not expect the schools to solve these problems, they certainly and justifiably expect them to contribute to their solution by improving the quality of education and, if need be, the amount of education available to the public.

Given these goals and needs, a more acceptable solution to the problem of "underemployment" than cutting back on the amount of public education, changing its nature and attempting to lower student aspirations would be to support reforms in the work place which show potential for increasing opportunities for workers to exercise and enhance their abilities on the job.

Although CBE programs wish to effect reforms in work settings—to produce competent, motivated, creative workers though improving the quality of education for work--it is unrealistic to expect these programs to have any significant impact unless problems in the work place are being addressed simultaneously and with equal zeal. A good beginning of a systematic attack on these problems would be:

(a) To review problems in the work place and set priorities for their resolution.

(b) To relate problems of the work place to the potentialities of CBE to determine guidelines for sponsoring joint efforts at problem resolution. (For example, creating career ladders and bridges in employment--CBE backing this up with locally available, specially tailored programs easily accessed by full-time workers; closely coordinated work/study programs; work-site seminars, etc.).

(c) To evaluate (including economic impact studies) experiments addressing identified problems in U.S. and abroad (especially experiments which expand opportunities to learn and to be creative on the job) to determine effectiveness and feasibility.**

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* Among social indicators of the problems--not that anyone needs reminding--are: violence, a soaring crime rate, property destruction, drug abuse, alcoholism, child abuse, industrial sabbotage, fanaticism.

** The Ministry of Education in Sweden is currently studying work setting experiments in many countries.

(d) To devise means to inform employers of discoveries and evaluations of experiments.

(e) To search for ways to engage the talents and abilities of adults in problem resolution (not necessarily remunerated employment).

D. WORK/STUDY AND CBE

CBE has the potential to make work/study programs more effective learning experiences. If the ability and proficiency level requirements are known for jobs to which students might be assigned, more suitable placements could be made which would give students an opportunity to practice their skills, apply their knowledge and further develop their abilities.

Many CBE programs have modularized their curriculum in order to provide work/study backup seminars, mini-workshops, lectures, etc., which deal with the theoretical aspects of the work in which students are engaged and provide a forum for dealing with the frustrations and problems students encounter on the job.

Again, accurate information about the nature of the jobs students might fill is needed to implement these ideas.

E. OCCUPATIONAL LICENSING AND CBE

Between college graduation and a job there stands the institution of occupational licensing. If competency-based programs revise the education they offer to bring it more into line with the demands of actual practice, and if occupational licensing boards do not, then there is the risk that CBE graduates will have difficulty with licensing examinations. These exams need to be scrutinized to determine their rational relationship to competent practice.*

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* A proposal is being submitted to the Carnegie Corporation through the Educational Policy Research Center at Syracuse to address this problem area.

F. INFORMATION NEEDS OF CBE

CBE educators are not alone in needing the following kinds of information to enlighten program planning. Some of the information is available at present; but it takes considerable expertise and enormous amounts of time to locate and interpret. The talent to digest statistics, analyze them in light of educators' interests and needs, and provide intelligible and intelligent interpretations is a rare one, to be sure. It is, however, a critical talent to locate and employ if educators are to make intelligent use of the broad array of data available to planners.

Information Needs:

- -Projected demand for workers in various occupational areas;
- -Possible areas for new careers (unmet need areas);
- -Skills and areas of subject-matter mastery that threaten to become obsolete for jobs;
- -Dimensions of competent performance in various occupations;
- -Levels of proficiency needed at the job entry level and beyond;*
- -Information on local adult population educational demand (kinds of programs needed or desired, preferred times and locations, etc.).

G. CONCLUSION

Evaluation, policy analysis, and R&D in the area of education and work would be helpful to all educational programs attempting to become more relevant to the demands of occupational practice upon workers and to contribute to the resolution of problems in the world of work. Much exciting experimentation in this area is occurring at scattered sites across the globe. There is considerable momentum among employers for inventing new operating

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*Although CBE programs may decide to award credentials for performance levels adequate for entry into many jobs, most wish to provide part-time adult education opportunities for workers to upgrade and expand their abilities as they gain experience on the job.

styles, new educational programs for workers, new managerial structures, and new modes of work organization. There seems to be far more openness to new ideas than was the case in past decades.* The likelihood is that the findings of sponsored projects in education and work would be put to good use by both educators and employers--provided, of course, these findings were put into a form meaningful to them.**

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* Maybe this can be chalked up to "too high aspirations" and "over-education."

** Included as an Appendix are the recommendations for useful projects in this area submitted to the EPRC by James O'Toole.

APPENDIX

RESEARCH AND ANALYSIS SUGGESTIONS*

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*From paper by James O'Toole, "Human Resources Development and Competency-Based Education," prepared for Educational Policy Research Center, Syracuse University Research Corporation, June 20, 1975 under NIE Contract #400-75-0036. Copies of paper available upon request.

Research and Analysis Suggestions

To find ways to utilize competency-based education as a lever on problems of underemployment and credentialism will probably not require much new scholarly research, but will require evaluation of existing experiments and considerable efforts in policy analysis. Currently, N.I.E. mostly sponsors research (i.e., a methodology that has its base in the testing of theories) and not policy analysis (i.e., a methodology designed as a guide to action). There are literally thousands of pieces of undigested research on every aspect of education and work, and hundreds of applicable but unevaluated and undisseminated experiments going on around the world. What needs to be done is to evaluate and to analyze what is known and to translate it into terms relevant for policy-makers. To begin, N.I.E. could evaluate the current, on-going experiments with such things as:

* Year-Round School to provide more "summer jobs" for youth
* Flexible modular scheduling
* Revisions in average daily attendance regulations
* Credit for work experience
* External degree options
* Community internships
* Industry-based degree programs
* Foreign competency-based programs, such as one in Japan where one million people were certified in 78 occupations between 1959-1971. Tests were based on both theory and practice.

N.I.E. could then analyze the costs and benefits of some of the dozens of rather well thought out proposals in this area, such as the following which were recently developed by the National Manpower Institute:

* That the cash value of the unused portion of "twelve years of free education" be available to those who did not receive that education in their youth, for a broad range of learning opportunities.

* That the Unemployment Insurance system be adapted to provide income support for unemployed adults who pursue further education and training in order to make a job-market adjustment, and extended for this purpose beyond normal duration periods.

* That additional educational options be developed for adults, with particular attention to "open universities," certification based on competence examinations, credit for experience, and a broader community base for the expanding community colleges.

* That thorough inquiry be instituted into ways and means of creating workable incentives to increase employer investment in training.

* That to reduce the barriers of job mobility, consideration be given to more flexible seniority systems, to the fuller vesting of pensions, and to removing unnecessarily restrictive occupational licensing practices.

* That the principle of flexible work scheduling, especially for the purpose of dovetailing work with part-time educational opportunities, be applied as broadly as possible.

* That community councils be instituted that are designed to:

  (1) match people with work and educational opportunities;
  (2) counsel employers in the redesign of jobs;
  (3) lobby for the creation of part-time and flexible jobs and
  (4) engage in local manpower planning.

Important areas in pure research that might be initiated include:

* Is the current relative economic disadvantage of college graduates a long-term or short-term problem?

* What is the effect of cyclical economic conditions on the expectations about work of young people and their desire for higher credentials?

* Would credentialing and underemployment problems disappear in a full-employment economy?

* To what extent is underemployment the cause of social and political alientation?

Finally, N.I.E. might engage in some normative futures research such as:

* Designing a curriculum that infuses theoretical and liberal concepts into vocational training or infuses work concepts into liberal education.

* Designing a system for better forecasting of labor-market demand.

* Designing a system for life-long, continuing education that would be attractive to all social classes.

* Designing a system of work sabbaticals that does not require massive federal expenditures.

* Designing a system for competency-based credentialing that is as acceptable and transferable as college grades and ETS test scores.

* Design ways to make work a learning experience for more people.